

**ABSTRACT**

A system for controlling the true output power of a transmitter includes a voltage detector in communication with a power amplifier for detecting an output voltage of the power amplifier and generating a voltage signal proportional to the output voltage. A current detector in communication with the power amplifier detects an output current of the power amplifier and generates a current signal proportional to the output current. A power detector in communication with the voltage and current detectors detects a true output power delivered by the power amplifier. The power detector includes a multiplier for multiplying the current signal and the voltage signal to generate a power signal proportional to the true output power. A power controller in communication with the power detector and the power amplifier controls the power amplifier to regulate the true output power based on the power signal.